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ABSTRACT

A three-part study examining the efficacy of a reading recovery program for learning disabled first grade students is described in this paper. An introduction outlines the Ohio Reading Recovery project and explains the purpose of the study. Part 1 describes the first phase of the study, in which 110 poor readers, including 35 learning disabled first grade students, were placed in the program's daily half hour reading sessions. Results indicated that of the 35 disabled students, 33 completed the program, and 27 needed no further reading instruction. The second part of the paper describes the comparison of the oral-text reading records for seven months of six learning disabled children who had been discontinued from the program and six children who were not learning disabled. A procedure section notes that the childrens' oral reading behavior was coded for meaning, structure, and/or visual cue errors and self-corrections, while the results section states that learning disabled children relied too heavily on visual cues. A final section looks at a learning disabled child who accelerated rapidly through the program after he was taught to use a multiple cuing system rather than attending to visual cues alone. The summary comments on the need for further study of reading programs for learning disabled students in comparison with this project. (Five tables and eight references are included.) (JC)

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Reading Recovery: An Effective Intervention Program for Learning Disabled First Graders

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Reading Recovery: An Effective Intervention Program for Learning Disabled First Graders

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The low reading performance of a substantial number of average ability first grade students is a continuing concern of parents and educators. In the United States, children who appear to have normal intelligence but are failing in beginning reading instruction are often labeled "learning disabled." Reading is the most commonly studied academic subject in the learning disability research (Torgensen & Dice, 1980,) and learning disability studies generally document evidence of reading problems in the primary grades.

Current understandings of learning disabilities as well as reading disabilities are unclear and controversial. Many beliefs about learning disabilities and treatments for learning disabilities can be viewed as popularized misconceptions (Lewis, 1983). Major differences also exist among theoretical assumptions about the nature of reading disability (Johnston, 1985). Models based on limitations in verbal processing and neurological factors of reading failure (Vellutino, 1983) suggest inappropriate strategies evident in the primary years are unchangeable and must be worked around. Recent research by Clay (1979, 1985; Pinnell, Short, Lyons & Young, 1986) documents that

children who have failed after one year of instruction can be taught necessary strategies to independently read text.

Data reported in this paper are based on research collected in the 1985-1986 Ohio Reading Recovery project. Reading Recovery is a 30 minute, one-on-one intervention program for the poorest readers (lowest 20%) in first grade classrooms as determined by a comprehensive battery of individually administered diagnostic instruments (Clay, 1979, 1985). The primary goals of the program are to reduce reading failure through early intervention and to help children become independent readers. The purpose of this program is to bring children "at risk" of reading failure to the average of their class by helping them develop a self improving system for continued growth in reading without additional help.

The study reported in this paper has three phases. First, to determine if children eligible for Reading Recovery services and identified as "learning disabled" can reach average levels in their respective first grade classrooms. Second, to compare oral reading error patterns of discontinued Reading Recovery "learning disabled" children with discontinued Reading Recovery children not considered "learning disabled." Third, to examine the error patterns of behavior and instructional program for one "learning disabled" child who accelerated rapidly from entry to exit from the program.

Part 1 -- Progress of first grade children in the Ohio Reading Recovery Project labeled as "learning disabled."

SUBJECTS

The subjects in this study were 35 first grade students, selected from the poorest readers in the State of Ohio Reading Recovery Project (N=110), who were also identified as learning disabled. Final bases for classification included written referral by a teacher at the beginning of first grade (N=12), a standardized psychological test (N=7), and informal comments by administrators, teachers, and parents that the child is learning disabled and will be tested for placement during the first grade (N=16). No formal intelligence tests were administered to the children, however, it was generally agreed that they could function within the normal range of intelligence.

PROCEDURES

The total population of children (N=570) in 24 classrooms was test in October, 1985. Each of the 24 teacher-leaders from the 18 sites throughout the State of Ohio tested one complete first grade classroom. The four lowest readers in each classroom (N=110) were selected using a combination of teacher judgement and the October scores on the Diagnostic Survey and Text Reading (Clay, 1985). As these children moved or were discontinued from the program other of the lowest children received Reading Recovery instruction 30 minutes each day. Each

teacher-leader tested the same complete classroom in May (Lyons, Pinnell, Short, & Young, 1986).

ANALYSIS

Reading Recovery children who started at the bottom of their class during the 1985-1986 school year were compared with the performance of other children starting at an average level of the class during the 1985-1986 school year on six different tests: (1) Letter Identification; (2) Ohio Word Test; (3) Concepts About Print; (4) Writing Vocabulary; (5) Dictation; and (6) Text Reading. One group of children performing at the bottom of their class on these six measures was assigned to the Reading Recovery Program. Other children performing within plus or minus one-half standard deviation of the October class mean on each measure were assigned to comparison groups representing the average of the class. The actual composition of the comparison groups varied depending on the performance of children on each dependent variable measure. There was also variability among first grade classrooms. What was average for one first grade classroom was not necessarily average for another first grade classroom at a different site.

The analysis reported provided one way of comparing Reading Recovery children to an estimated "average" and addressed the goal of the program, which is to bring children's achievement into the "average band" of a typical class in the school or district.

RESULTS

A total of 110 children were served during the 1985-1986 school year. The discontinuing rate for the year was 73% of the children who had a full program (minimum of 60 lessons). Of these 110 children, 35 were further classified as learning disabled. The discontinuing rate of these learning disabled children who had a full program(N=33) was 82%. The average number of lessons for the 27 children who were discontinued (no longer needing instruction) from the program was 87 which is equivalent to 17.4 weeks.

Part 2 -- Analysis of oral reading error patterns of children identified as "learning disabled" and not "learning disabled" who were discontinued from the Reading Recovery Program.

SUBJECTS

The oral text reading records of a random sample of discontinued children (N=6) identified as "learning disabled" and a random sample of discontinued children (N=6) not identified as "learning disabled" were examined. Data was collected from cumulative oral running records of four boys and two girls labeled as "learning disabled" and three boys and three girls not "learning disabled" over a seven month period.

PROCEDURES

An integral part of the Reading Recovery Program procedures

is systematic observation of the child's oral reading behaviors. Data was collected from 360 oral records (running records) of 12 children. Three running records, with an accuracy rate of 85% to 98%, at each of the early levels (3 through 10) were randomly selected. To control for consistency in recording error patterns, a random sample of six discontinued children not identified as "learning disabled" was selected from the group of children taught by the teachers of the six "learning disabled" children.

The Reading Recovery teacher records every error and self correction according to three basic cueing systems: meaning (M), structure (S), and/or visual (V). Accurate responses are recorded with a check. An analysis of the running record identifies which cueing system(s) the child is attending to and provides a reliable, systematic way of identifying how the reader monitors and corrects performance while reading increasingly more difficult texts. Conventions for taking running records and the reliability and validity of the coding system have been established (Clay, 1979, 1985). Reading Recovery teachers are trained and continuously monitored to insure accurate coding and analysis of errors and self-corrections.

While the text reading levels range from one through twenty-six (representing basal reading levels preprimer through grade six), only levels 3 through 10 were selected for analysis.

Research (Clay, 1986) has shown that at the earlier levels a teacher can observe and record how the child is using problem solving strategies as the child cross-checks one cueing system against another. This "reading work" can be heard in the earlier stages of the reading process but it becomes a silent process in later stages as the child becomes more proficient in orchestrating strategies and using multiple cueing systems. The orchestration proceeds accelerated progress which generally occurs around levels 7, 8, and 9 (Pinnell, Short, Lyons, & Young 1986).

The running records are quantified by calculating the number of errors with the number of running words. To control for number of errors, records with accuracy rates between 85% and 98% were selected. Evidence of how effectively the child works with the sequence of cues is most likely to be heard when the child is performing adequately. The successful reader who is making no errors is monitoring his reading, orchestrating the cueing systems at all times.

ANALYSIS

Two individuals were trained to tally the analysis of the running records of the six "learning disabled" and six not "learning disabled" children as coded by seven Reading Recovery teachers. A not "learning disabled" child's running records had to be randomly selected. The other discontinued student, that the teacher of the "learning disabled" child worked with, was

an ESL (English as a Second Language) child. The two raters scored the 324 running records independently according to establish procedures (Clay, 1985). Interrater reliability was .90.

The errors and self-corrections were tallied and classified according to seven cueing systems; meaning (M), structure (S), visual (V), meaning and structure (MS), meaning and visual (MV), structure and visual (SV), meaning, sturcture, and visual (MSV). The number of errors and self corrections for each of the seven types of cues used from levels 3 through 10 were divided by the total number of errors, yielding the percentage of time each of the errors was related to use of meaning, structure, and visual information or combination of these sources of information. Mean scores for each of the seven sources of information were computed for the six "learning disabled" and six not "learning disabled" students. The mean scores indicated what percent of the errors for each group of Reading Recovery children was related to specific cueing systems. This analysis accounted for variability in the percentage and types of information used and provide a comparative devise upon which to base the following results.

RESULTS

The overall error patterns of behaviors for discontinued children identified as "learning disabled" were different from the error patterns of discontinued children who were not

considered "learning disabled".

Insert Figure 1 about here

Frequency distributions represented in the bar graph graphically display that "learning disabled" children overrely on visual information during the early text reading levels (3 through 6) compared to not "learning disabled" children who rely more on the meaning and structure of the language in level 3 to integrating meaning, structure and visual information in levels 4, 5 and 6.

Insert Figure 2 about here

Analysis of error patterns in levels 7 through 10 show that 50% of the errors at level 7 and 42% of the errors at level 8 relate to the use of visual information. It was not until levels 9 and 10 that the "learning disabled" children began to search for and orchestrate multiple sources of information. Children not considered "learning disabled" began to use multiple cueing systems at level 7 and continued this pattern throughout levels 8, 9, and 10.

Part 3 -- Analyses of the oral reading error patterns of behavior and instructional program of one "learning disabled" child who accelerated rapidly.

SUBJECT

One "learning disabled" first grade boy who entered the program at text reading level 3 (level 5 is equivalent to PrePremer 1 in Ginn Basal Series) and was discontinued at text reading level 18 (Ginn Basal 3) after 34 lessons.

PROCEDURES

Running records read at 85% to 98% accuracy from levels 3 through 18 were analyzed using procedures described in Part 2. The teachers' instructional focus and child's responses were evaluated by examining 34 lesson plans. Data from the lesson plans provided insight into teacher/child interactional patterns and directional change as the systematic instructional program was developed, revised, implemented, and assessed. Ginn Basal final testing levels 20 (grade four) through 26 (grade six) were analyzed to assess error patterns at the end of the first grade, and six weeks after the child was discontinued from the program.

ANALYSIS

Procedures described in Part 2 for analyzing the error patterns for text reading levels 2 through 10 were followed for analyzing the remaining levels 12 through 18. The child was discontinued from the program when he reached level 18. Six weeks later, the child's text reading level was reassessed using specific passages from the Ginn Basal Series: Barefoot Island (grade four), Ride the Sunrise (grade five) and, Flights of Color (grade six).

The same two individuals who tallied and classified the error patterns according to the seven cueing systems in Part 2 of this study, continued the analysis in Part 3. Interrater reliability was .92.

RESULTS

The overall error patterns of behavior for the one child who accelerated quickly is represented in Figure 3.

Insert Figure 3 about here

The data pictured show a shift from using visual information 90% of the time in level 3 to 66% of the time in level 4. At level 6, 33% of the errors related to the use of meaning and structure with visual information accounting for 28% of the errors. Major shifts in the child's attention to multiple cueing systems (meaning, structure, and visual information) are evident in levels 7 and 8.

Insert Figure 4 about here

Evidence of the child's integration of and consistent searching for meaning, structure and visual information is revealed in levels 10 (68%), 12 (95%), 14 (100%), 16 (77%), and 18 (75%). He was discontinued from the program reading level 18 at 96% accuracy and was placed in the top reading group in his

first grade classroom. The children in this group were reading in a third grade basal text.

Proficient readers will eventually resort to visual information when they cannot comprehend what they are reading (Clay, 1985). This pattern of behavior was evident during final testing which occured six weeks after this "learning disabled" boy was discontinued from the program.

Insert Figure 5 about here

The Ginn Basal text reading levels graphically displayed in Figure 5 indicated that the "learning disabled" child continued to rely on multiple cueing systems to read basal reading material in levels 20 - 26, however, when the meaning and structure of the language became increasing more difficult, the child resorted to using visual information. He read level 26, which is equivilent to a sixth grade basal text at 97% accuracy.

Second grade follow-up research shows that he continued to progress in the top reading group with regular classroom instruction. The second grade classroom teacher reports that she was "shocked" to hear one of the strongest readers and best writers of short stories in the second grade, qualified for Reading Recovery instruction at the beginning of first grade. Interviews with the child, teacher, and parent suggest that this

boy has a definite love for reading, choosing to read whenever he finds time.

The "learning disabled" child who accelerated rapidly shifted his focus from primarily using visual information at level 3 to using semantic, syntactic, and visual cueing systems at level 4. The teacher's lesson plans revealed an emphasis on teaching the child strategies for searching for meaning and structural cues at level 3, asking questions to support the orchestration of strategies in a balanced way. While the teacher acknowledged the child's attempt to use visual information, her questions stressed the importance and value of syntactic patterns with an emphasis placed on meaning.

DISCUSSION

An analysis of error patterns yields insights into what children attend to during oral reading. The "learning disabled" children overrelied on visual information until they reached level 9, which in roughly equilivant to a Primer basal text. These findings are not surprising because sound/symbol relationships are emphasized in most basal preprimers. I would argue that the "learning disabled" children learned what the graded course of study intended. This is especially noteworthy because Reading Recovery books at levels 2 through 10 have a strong syntactic pattern with focus on meaning. Sound/symbol relationships are not emphasized. The children who were not labled "learning disabled" attended to the syntactic pattern and

meaning of the stories early in the program (level 3) and continued that pattern until they were discontinued. The "learning disabled" children ignored the syntactic pattern and meaning cues.

The "learning disabled" child who accelerated rapidly however, did shift his focus from primarily using visual information at level 3 to using multiple cueing systems at level 4. The teacher's lesson plans revealed an emphasis on teaching strategies for searching for meaning and structural cues at level 3, asking questions to support the orchestration of strategies in a balanced way. The teacher acknowledged the child's attempts to use visual information, but insisted that meaning and the structure of the language was most important. The focus on meaning was evident in the type of errors and comments the child made in levels 5 and 6. By level 8, he was using multiple sources of information 71% of the time. This error pattern is similar to the not "learning disabled" children who began to shift their attention to multiple sources of information at level 4. The shift from overreliance on visual information to multiple sources did not occur until level 9 for the other five "learning disabled" children.

The lesson plans reveal that even though the children overrelied on visual/graphic information, the teacher consistently directed the child's attention to syntactic and semantic information. The findings suggest that 1) the

interaction between this "learning disabled" boy and his teacher can explain this child's early acceleration resulting in discontinuing in 34 lessons and 2) that instruction is directly related to shifts in attention, orchestration, and flexibility in using multiple cueing systems.

Issues related to learning disability generally depend on the definition that the child must have average or above average intelligence and be a poor reader. Reading Recovery does not depend on a definition of intelligence or on someone's estimate of whether the child will be able to learn or not. Since the program identifies and takes in all children who are low performers, it must therefore take in children who might be labeled by others as learning disabled. The data reveal that 82% of the children identified as learning disabled succeed and were discontinued in the Reading Recovery Program. These children have lost their label. They are now considered average readers, making average progress with regular classroom instruction. Instructionally disabled, not learning disabled, is a better label for this "special" group of first graders.

SUMMARY

Results from the Ohio Reading Recovery Program, Pinnell et al. (1986), indicate that for children who receive 60 lessons or are discontinued, 73% reach average levels and are released from the program. Evidence from this study shows that for these discontinued children, who are also identified as "learning

disabled," 82% reached average levels in their respective first grade classrooms after approximately 17 weeks of instruction. Additional evidence suggests that poor readers classified as "learning disabled" differ from other failing readers in what they attend to during early reading levels.

Further study to compare the Reading Recovery Program with an alternative compensatory "learning disabled" program is needed. Such a study is underway.

Allington and Shake (1986) argue that remedial reading programs must be designed to support the core curriculum otherwise they will be perceived as peripheral and discarded. The Ohio Reading Recovery Program demonstrates that failing readers, whether they are "learning disabled" or not can reach average reading levels in their classrooms and maintain these gains with regular classroom reading instruction. Challenges that Allington and Shake (1986) present have been addressed.

Figure 1

Error Patterns of Discontinued "Learning Disabled" and not "Learning Disabled" First Grade Students on Text Reading Levels Three through Six.

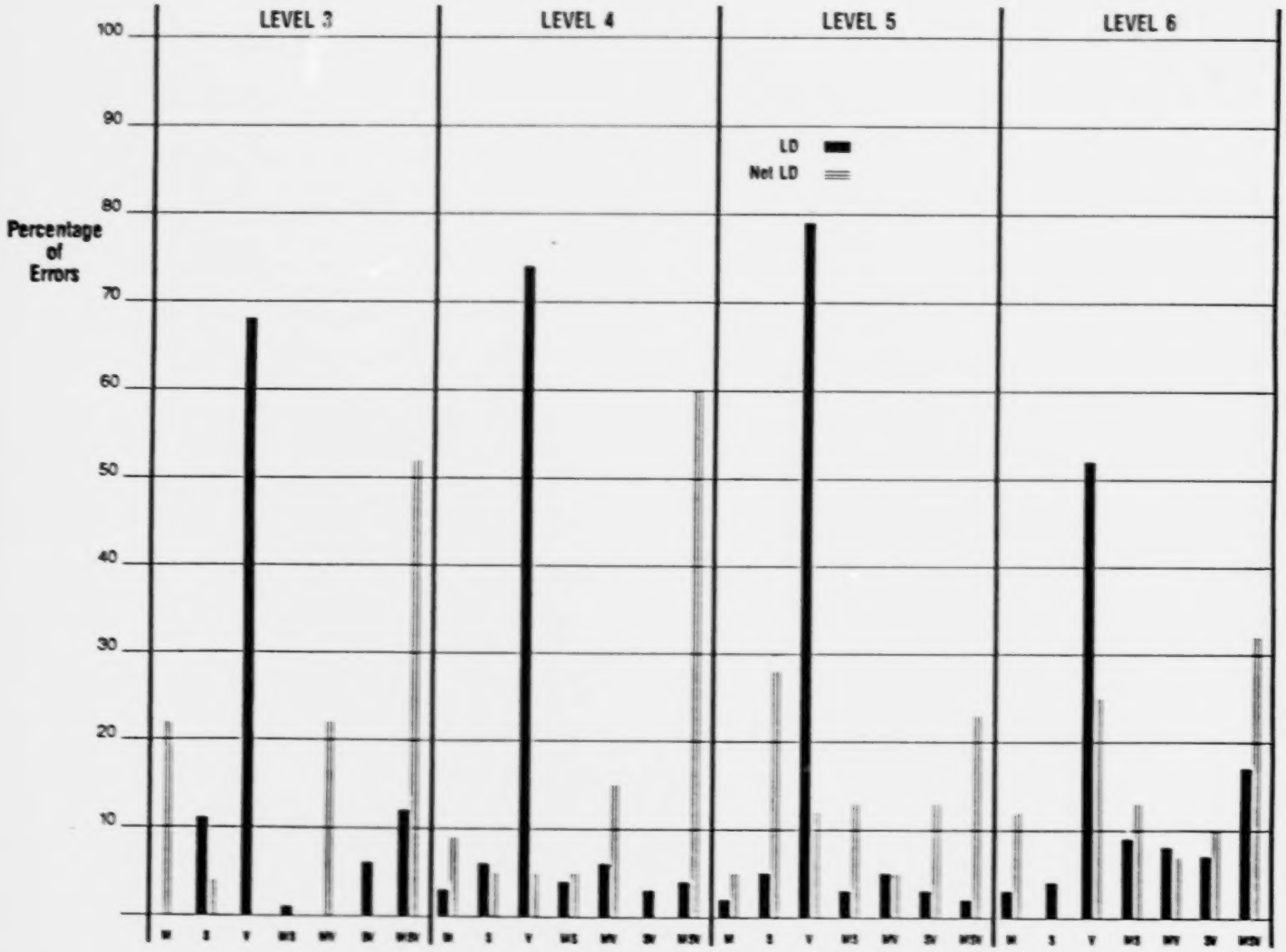


Figure 2

Error Patterns of Discontinued "Learning Disabled" and not "Learning Disabled" First Grade Students on Text Reading Levels Seven through Ten.

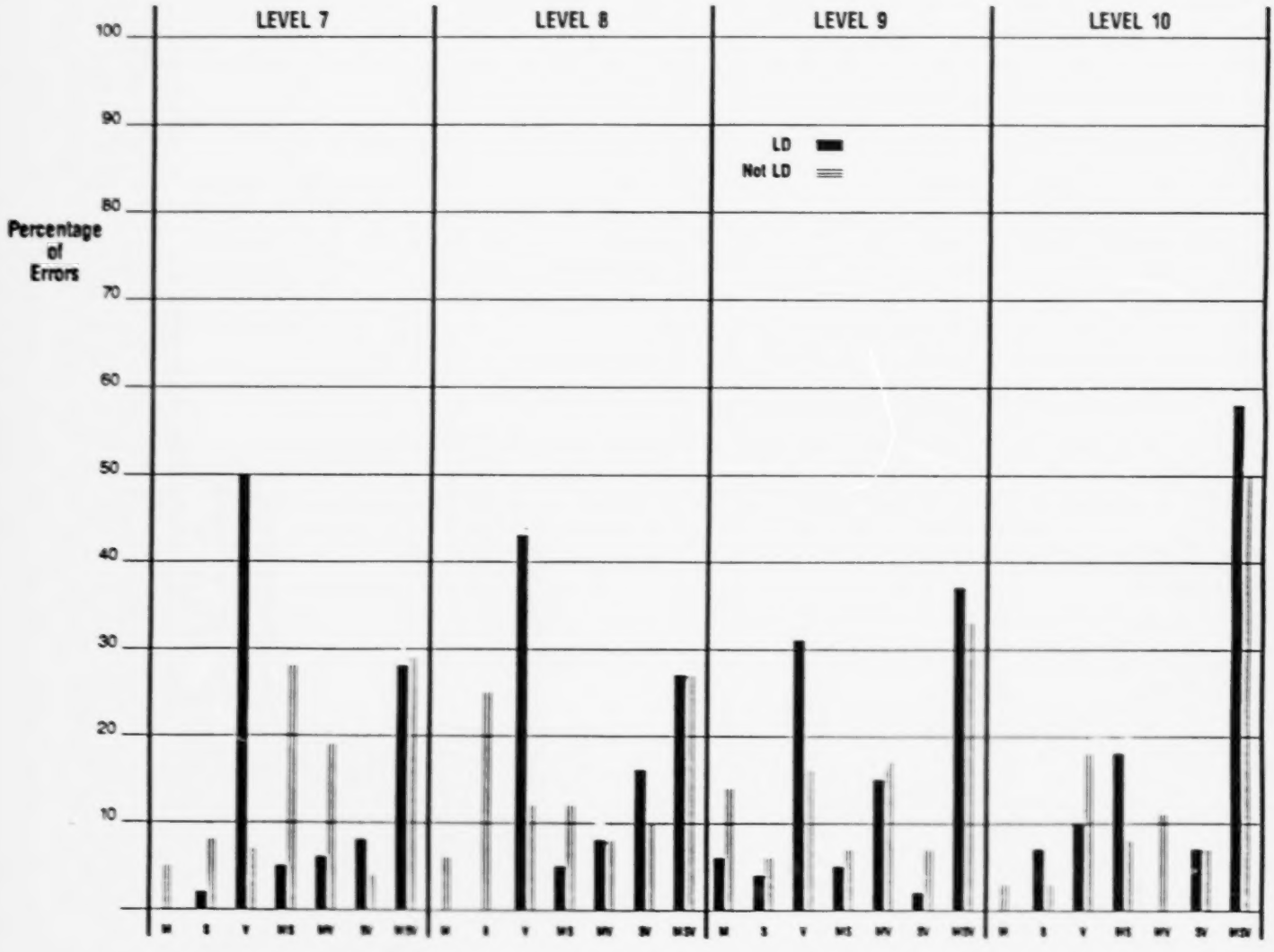


Figure 3

Error Patterns of One "Learning Disabled" Child
Who Accelerated
Rapidly

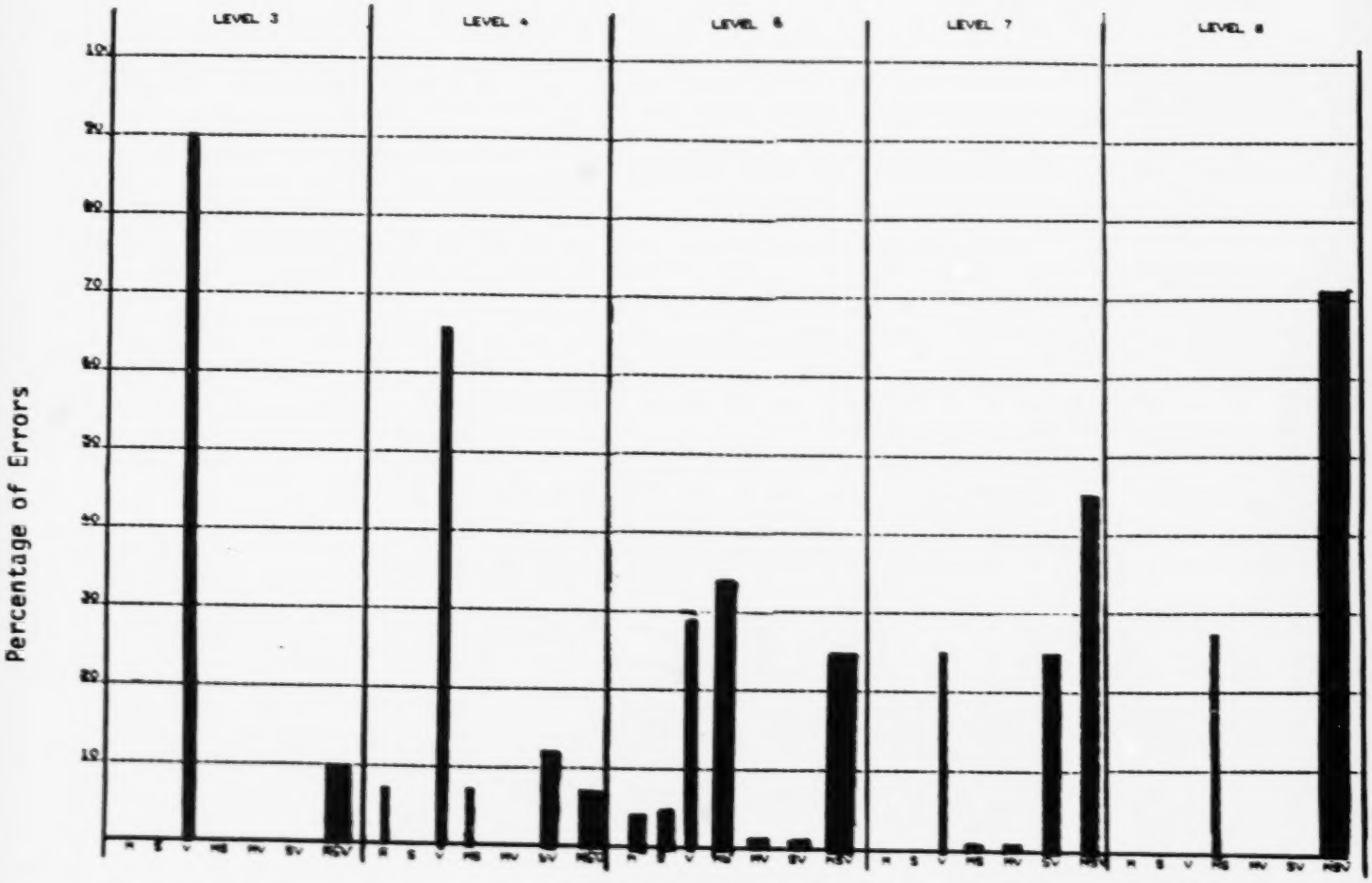


Figure 4

Error Patterns of One "Learning Disabled" Child
Who Accelerated Rapidly

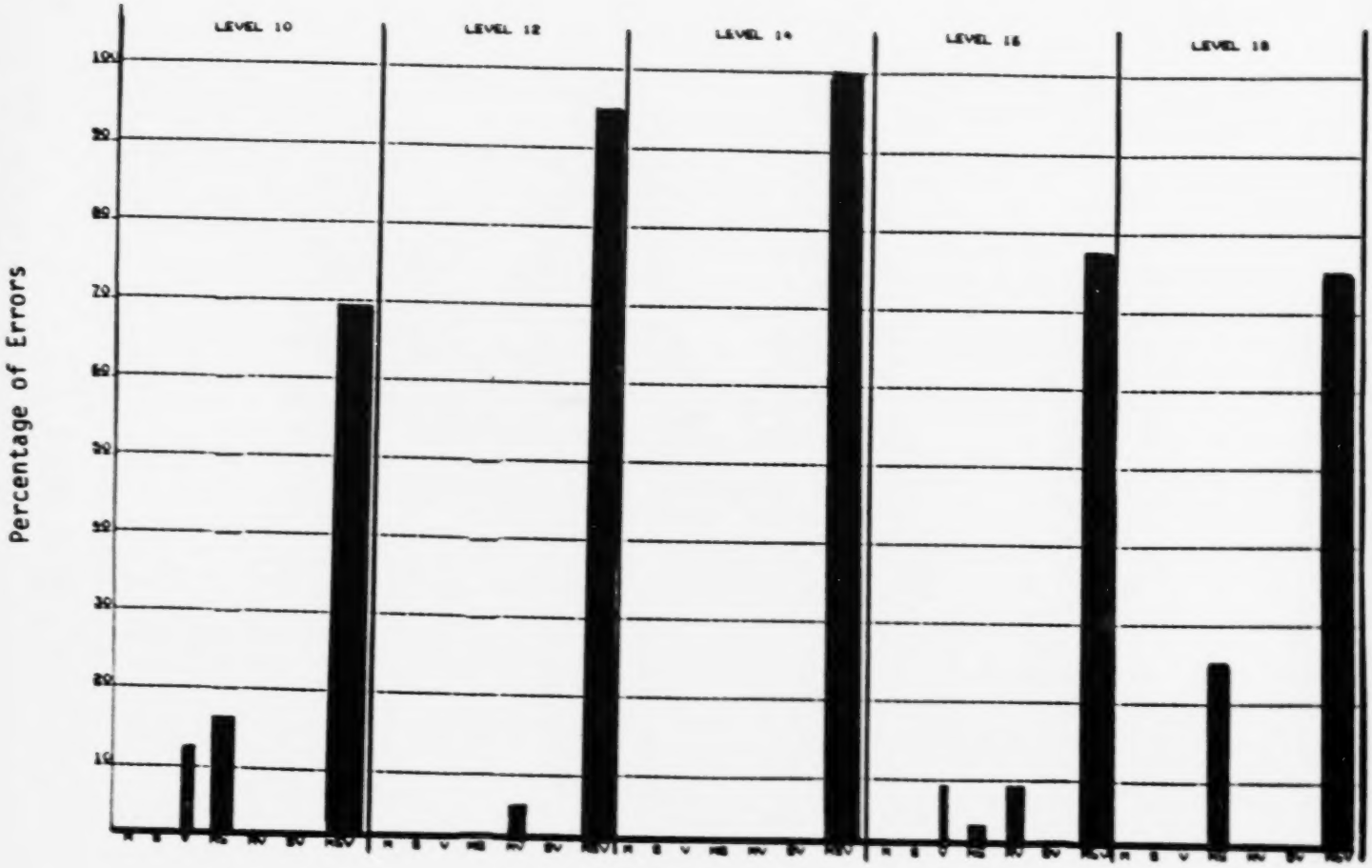
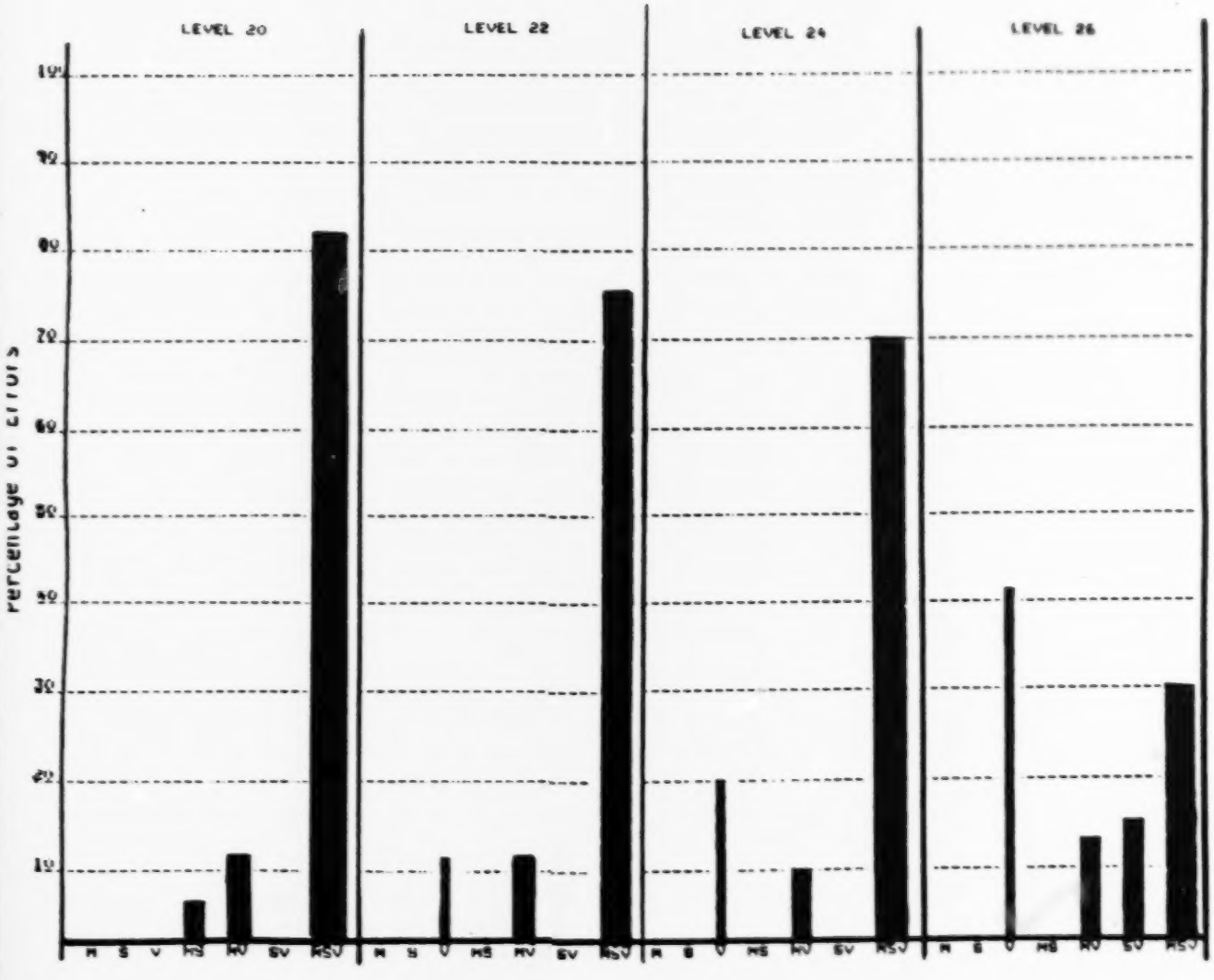


Figure 5

Error Patterns of One "Learning Disabled" Child
Who Accelerated Rapidly
Ginn Basal Series Testing Levels



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